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APPEAL NO.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

APPELLANTS' BRIEF

Barrett Richard Bobsein, et al.

Application for Patent Filed January 31, 2001

Serial No. 09/774,064

WATERBORNE PAPER OR PAPERBOARD COATING COMPOSITION

Ronald D. Bakule
Agent for Appellants

P. Chin
Examiner

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DN A01157

In re application of
Barrett Richard Bobsein, et al..

Paper No.: 14

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Group Art Unit: 1731

Filed: January 31, 2001

Examiner: P. Chin

For: WATERBORNE PAPER OR PAPERBOARD COATING COMPOSITION

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF FOR APPELLANTS

This is an appeal from the final rejection by the Examiner of December 30, 2002 rejecting claims 1 and 3. Appellants filed a Notice of Appeal pursuant to 37 C.F.R. 1.191 on March 28, 2003.

An authorization to charge payment of the fee for the filing of the Appeal Brief to Deposit Account 18-1850 is also enclosed.



REAL PARTY IN INTEREST [37 C.F.R. 1.192(c)(1)]

The real party in interest is Rohm and Haas Company, 100 Independence Mall West, Philadelphia, PA 19106-2399.

RELATED APPEALS AND INTERFERENCES [37 C.F.R. 1.192(c)(2)]

There are no other related appeals or interferences that will directly affect or be directly affected or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS [37 C.F.R. 1.192(c)(3)]

The status of the claims is as follows:

Allowed claims	-	none
Claims objected to	-	none
Claims cancelled	-	none
Claims pending	-	1 and 3
Claims rejected	-	1 and 3
Claims on appeal	-	1 and 3

STATUS OF AMENDMENTS [37 C.F.R. 1.192(c)(4)]

The rejected claims are set out in Appendix 1.

SUMMARY OF INVENTION [37 C.F.R. 1.192(c)(5)]

Appellants claim (claims 1 and 3) a waterborne pigmented paper or paperboard coating composition comprising pigment comprising 50% to 100%, by weight of said pigment, calcium carbonate and from 1% to 25%, as dry weight by weight of said pigment, of an aqueous polymeric dispersion comprising

(a) 95-25% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a first emulsion polymer having an average particle diameter of 150 to 3000 nanometers and

(b) 5·75% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a second emulsion polymer having an average particle diameter of 40 to 600 nanometers wherein the ratio of said average particle diameter of said first emulsion polymer to said average particle diameter of said second emulsion polymer is from 1.2 to 60, wherein at least said first emulsion polymer particles, when dry, contain at least one void, and wherein said first emulsion polymer is prepared in the presence of said second emulsion polymer or said second emulsion polymer is prepared in the presence of said first emulsion polymer.

Appellants invention is directed to a high calcium carbonate paper or paperboard coating including a bimodal particle size emulsion polymer wherein at least the larger mode of the polymer contains, when dry, at least one void.

ISSUES [37 C.F.R. 1.192(c)(6)]

The first issue is whether appellant's invention of claims 1 and 3 is unpatentable under 35 USC 102(b) over JP 3-340774 to Hoshino ("Hoshino").

And the second issue is whether appellant's invention of claims 1 and 3 is obvious under 35 USC 103(a) over Hoshino.

THE REJECTIONS

Claims 1 and 3 stand finally rejected under 35 USC 102(b) as being unpatentable over Hoshino.

Claims 1 and 3 stand finally rejected under 35 USC 103(a) as being unpatentable over Hoshino.

The Examiner's Arguments

The Examiner asserts that claims 1 and 3 stand finally rejected under 35 USC 102(b) as being unpatentable over Hoshino because Hoshino

discloses a mixture of inorganic pigment including minor amounts of CaCO₃ and hollow emulsion polymer particles having a bimodal size distribution.

The examiner asserts that claims 1 and 3 stand finally rejected under 35 USC 103(a) as being unpatentable over Hoshino because Hoshino discloses a mixture of inorganic pigment including minor amounts CaCO₃ with major amounts of total pigment and hollow emulsion polymer particles having a bimodal size distribution.

GROUPING OF CLAIMS [37 C.F.R. 1.192(c)(7)]

As to the rejections applied against claims 1 and 3 under 35 USC 102(a) and under 35 USC 103(a), it is appellants' intention for each ground of rejection that the rejected claims stand or fall together.

ARGUMENTS [37 C.F.R. 1.192(c)(8)]

First Issue

Appellants argue that their claims 1 and 3 are not unpatentable over Hoshino under 35 USC 102(b) because Hoshino does not disclose each and every element of their claims. Hoshino does not disclose a waterborne pigmented paper or paperboard coating composition which is a "high carbonate" composition, as it is termed in the art, namely, a composition as claimed by appellants (claim 1) in which the pigment includes 50% to 100% calcium carbonate, by weight based on pigment weight. The examiner asserts (Paper No. 11, paragraph 2.) that "the fact is that the pigment of Hoshino contains hollow polymer particles in an amount of 3-30% of the pigment mixture, and therefore calcium carbonate is present in an amount of 97-70% of the pigment." Appellants traverse because this is not the literal disclosure of Hoshino. Hoshino in fact discloses (Hoshino, [0017]) that "the amount in which the above-described emulsion particles are used, while not subject to any particular limitation as long as it is at least 1 wt% of the entire

pigment amount, is preferably 2 to 70 wt%, and ideally 3 to 30 wt%.

....during the mixing of the aforementioned binders, inorganic pigments, and emulsion particles.(emphasis added)”. Appellants maintain that the use of an extremely broad range of hollow polymer particles is disclosed (at least 1 wt% of the entire pigment amount) which is nowhere coupled with a conjugate amount of pigment which is exclusively calcium carbonate (as assumed by the examiner in his calculation), but, if anything, with a mixture of pigments which, in fact, is the general state of the paper coatings art. This meaning is reinforced by Hoshino’s only specific paper coating composition (Hoshino, [0029]), in which the pigment contains 27 wt% calcium carbonate (on Hoshino’s basis). Appellants respectfully submit that the disclosure of Hoshino is not to the high calcium carbonate compositions claimed by appellants. Therefore, Hoshino fails to disclose each and every element of appellants’ claims.

Further, the examiner (Paper No. 13, page 2) argues that “While the example employs a mixture, the Hoshino disclosure is not limited to mixtures of inorganic pigments and it is clear that a single inorganic pigment could be used depending on supply, costs, and simplifying management of material supply for manufacturing paper.(emphasis added)”. Appellants maintain that this speculation does not rise to the required level for anticipation.

Appellants, therefore, respectfully assert that their claims 1 and 3 are not anticipated by Hoshino under 35 USC 102(b).

Second Issue

Appellants argue that their claims 1and 3 are not unpatentable over Hoshino under 35 USC 103(a) because Hoshino fails to teach or suggest appellants’ composition. As the examiner points out, Hoshino’s disclosed ranges of the amount of polymer particles relative to pigment, the diameter of the larger (hollow) particles and the diameter of the smaller particles exhibit overlap but do not coincide with the selected ranges as claimed by

appellants. Further, Hoshino does not teach or suggest a waterborne pigmented paper or paperboard coating composition which is a high carbonate composition, as it is termed in the art, namely, a composition in which the pigment includes 50% to 100% calcium carbonate, by weight based on pigment weight, as claimed by appellants. Appellants maintain their analysis of Hoshino's disclosure as presented hereinabove. Appellants respectfully submit that the examiner has not met his burden in establishing a *prima facie* case of obviousness because he has not pointed to any disclosure within Hoshino which indicates a realization of the problem faced by appellants or which would motivate one skilled in the art to form appellants' composition.

In fact Hoshino's examples provide no teaching or suggestion of increased gloss or brightness through the use of his bimodal system even in his relatively low carbonate compositions. In Table 2 (Hoshino, [0031]) Hoshino's Comparative Example 1 (a unimodal polymer) exhibits substantially the same white paper gloss and print gloss as each of the Working Examples 1-5. And Hoshino's Comparative Example 2 (a unimodal polymer) exhibits substantially the same white paper gloss and print gloss as Working Example 5, to which it is closely related. The same trends are found for Hoshino's degree of whiteness. The fair teaching of Hoshino, appellants submit, is that his invention offers no suggestion of enhanced gloss or whiteness, thereby providing no motivation *per se* to then modify his composition to afford a gloss or brightness increase. Appellants' invention, on the other hand, is particularly directed to providing high carbonate coating compositions having higher sheet gloss as well as other advantages including brightness (Specification, page 2, lines 9-16).

Appellants respectfully submit that Hoshino, taken as a whole, does not teach or suggest their invention and that their claims 1 and 3, therefore, are not obvious under 35 USC 103(a) over Hoshino.

Conclusion

Appellants respectfully submit that the present invention as defined by claims 1 and 3 is not anticipated under 35 U.S.C. 102(b) over Hoshino because Hoshino fails to disclose each and every element of appellants' claims.

Appellants respectfully submit that the present invention as defined by claims 1 and 3 was not obvious as a whole to one of ordinary skill in the art at the time the invention was made over Hoshino under 35 U.S.C. 103(a) because the examiner has not met his burden in establishing a *prima facie* case of obviousness because he has not pointed to any teaching or suggestion within Hoshino which indicates a realization of the problem faced by appellants or which would motivate one skilled in the art to modify Hoshino's composition in order to form appellants' composition.

Appellants respectfully request the Board to reverse the Examiner's rejections and enter a Notice of Allowance. The Commissioner is hereby authorized to charge any additional fee which may be required, or to credit any overpayments to Deposit Account 18-1850.

Respectfully submitted,



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DATE: May 20, 2003

APPENDIX [37 C.F.R. 1.192(c)(9)]

CLAIMS 1 and 3

1. A waterborne pigmented paper or paperboard coating composition comprising pigment comprising 50% to 100%, by weight of said pigment, calcium carbonate and from 1% to 25%, as dry weight by weight of said pigment, of an aqueous polymeric dispersion comprising
 - (c) 95-25% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a first emulsion polymer having an average particle diameter of 150 to 3000 nanometers and
 - (d) 5-75% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a second emulsion polymer having an average particle diameter of 40 to 600 nanometerswherein the ratio of said average particle diameter of said first emulsion polymer to said average particle diameter of said second emulsion polymer is from 1.2 to 60,
wherein at least said first emulsion polymer particles, when dry, contain at least one void, and wherein said first emulsion polymer is prepared in the presence of said second emulsion polymer or said second emulsion polymer is prepared in the presence of said first emulsion polymer.
3. The waterborne pigmented paper or paperboard coating composition of claim 1 wherein said pigment comprises 70% to 100%, by weight of said pigment, calcium carbonate.



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CERTIFICATE OF FIRST CLASS MAILING

Dear Sir:

I hereby certify that this Original Appeal Brief and 2 copies and Deposit Account Form (in duplicate) are being deposited as First Class Mail with the United States Postal Service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated next to my signature below.

Date *May 20, 2003*

Signature

Donald D. Schuler